



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
|-----------------|-------------|----------------------|---------------------|------------------|

10/723,805

11/26/2003

Patrick Hosein

4740-230

9768

24112 7590 02/02/2011

COATS & BENNETT, PLLC  
1400 Crescent Green, Suite 300  
Cary, NC 27518

EXAMINER

LEE, JUSTIN YE

ART UNIT

PAPER NUMBER

2617

MAIL DATE

DELIVERY MODE

02/02/2011

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                                      |                                      |  |
|------------------------------|--------------------------------------|--------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/723,805 | <b>Applicant(s)</b><br>HOSEIN ET AL. |  |
|                              | <b>Examiner</b><br>JUSTIN Y. LEE     | <b>Art Unit</b><br>2617              |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 November 2010.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7-10 and 12-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 7-9, 14-20 is/are rejected.
- 7) ☒ Claim(s) 5, 10, 12, 13 and 21-23 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the power headroom" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 14 recites the limitation "the amount of transmit power" in line 9. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 and 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Black (US 6,397,070 B1) in view of Applicant Admitted Prior Art (Background of Invention, hereinafter, AAPA) and further in view of Fong et al. (US 2004/0223455 A1, hereinafter, Fong).

Consider claim 1, claim 1 is the method claim of claim 14 and having similar limitation as claim 14, therefore, see rejection to claim 14 for details.

Consider claim 14, Black discloses a mobile station (Fig. 1, MSs 12A-12c) comprising:

- a receiver for receiving a load indication from a base station, said load indication indicative of a reverse link load (Fig. 1 and Abstract and col. 5, lines 8-col. 6, lines 26 and col. 7, lines 43-44 and col. 8, lines 36-col. 9, lines 56, BS 10 sends reverse link load to MSs 12);

- a transmitter for transmitting signals to the base station at a variable data transmission rate dependent on the load indication (col. 5, lines 57-col. 6, lines 26, transmission rate is increased or decreased according to the indication); and

- a controller to determine an amount by which to adjust a transmission power of the transmitter, based on said load indication (col. 5, lines 57-col. 6, lines 26, reverse link transmission power is adjusted according to the indication), and to adjust the transmission power according to said determined amount (col. 5, lines 57-col. 6, lines 26, reverse link transmission power is adjusted according to the indication).

Black does not disclose wherein said power headroom threshold defines the amount of transmit power reserved for the transmitter for making data retransmissions under Automatic Repeat reQuest (ARQ) control.

AAPA further discloses wherein said power headroom threshold defines the amount of transmit power reserved for the transmitter for making data retransmissions

Art Unit: 2617

under Automatic Repeat reQuest (ARQ) control (paragraph 6, power headroom is used for retransmission in ARQ).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the power headroom threshold into Black's reverse link power adjustment system for the purposes of retransmission packets when packets are not transmitted properly.

Black and AAPA do not disclose the reverse link transmission power can be a power headroom.

Fong further discloses the reverse link transmission power can be a power headroom (paragraph 64, power headroom is the available transmit power for transmitting data on a reverse link and power headroom can be adjusted).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the power headroom into Black's reverse link power adjustment system for the purposes of adjusting power headroom to reflect the change in reverse channel so resource is utilized at its optimum.

AAPA further discloses wherein the power headroom threshold limits the data transmission rate of the mobile station (paragraph 6, the power headroom only allow a limited transmission rate to be transmitted based on how much the power headroom is).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the power headroom threshold into Black's

Art Unit: 2617

reverse link power adjustment system for the purposes of reserving enough power for reverse link transmission when needed.

5. Claims 2-3 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Black (US 6,397,070 B1) in view of Applicant Admitted Prior Art (Background of Invention, hereinafter, AAPA) and Fong et al. (US 2004/0223455 A1, hereinafter, Fong) as applied to claim 1 and 14 and further in view of Gopalakrishnann et al. (US 2002/0110101, hereinafter, Gopalakrishnann).

Consider claims 2-3 and 16, Black, AAPA and Fong do not disclose wherein receiving a load indicating from a base station comprises receiving the load indication in an upper layer message and the upper layer message is received over a common control channel.

Gopalakrishnann further discloses wherein receiving a load indicating from a base station comprises receiving the load indication in an upper layer message and the upper layer message is received over a common control channel (paragraph 68, information can be received in upper layer message).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention to modify the combination to include the teachings of Gopalakrishnann in order to allow for the most efficient messaging depending upon how fast and periodically the code space is changing.

6. Claims 4 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Black (US 6,397,070 B1) in view of Applicant Admitted Prior Art (Background of Invention, hereinafter, AAPA) and Fong et al. (US 2004/0223455 A1, hereinafter, Fong) as applied to claim 1 and 14 and further in view of Soliman (US 5,859,838).

Consider claims 4 and 17, Black, AAPA and Fong do not disclose wherein receiving a load indication from a base station comprises receiving a periodic load indication.

Soliman further discloses wherein receiving a load indication from a base station comprises receiving a periodic load indication (Abstract and col. 6, lines 51-57 and col. 7, lines 1-50, base station periodic communication with load device 102).

Therefore, it would have been obvious at the time the invention was made that person having ordinary skill in the art to modify Black, AAPA and Fong and Soliman system, such that estimating a reverse link load and transmitting a periodic load indication indicative of the reverse link load on a common control channel and transmit power based on the estimated reverse link load to mobile station to provide means for improved and accurate reverse link loading in CDMA network.

7. Claims 7-9 and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Black (US 6,397,070 B1) in view of Applicant Admitted Prior Art (Background of Invention, hereinafter, AAPA) and Fong et al. (US 2004/0223455 A1, hereinafter, Fong) and Soliman (US 5,859,838) as applied to claim 4 and 17 and further in view of Lakkakorpi (US 20030179704)).

Consider claims 7 and 18, Black, AAPA, Fong and Soliman do not disclose calculating a load tracking value based on two or more periodic load indications,

Lakkakorpi further discloses calculating a load tracking value based on two or more periodic load indications (Fig. 5 and paragraph 42-43, a load value is calculated using several load data).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention to modify the combination to include the teachings of Lakkakorpi in order to provide a more reliable measurement of the load on which the base changes getting a wider margin of measurements rather than a single measurement which could be a reading where a power spike or fallout occurs giving a false reading.

It would have been obvious for Black to utilize the calculated load tracking value for determining an amount by which to adjust the power headroom threshold comprises determining the amount by which to adjust the power headroom as a function of the load tracking value (col. 5, lines 57-col. 6, lines 26, once the load tracking value is calculated, it can be used to increase or decrease the transmission power). Therefore, the transmission power won't spike or drop too much to cause malfunction.

Consider claims 8-9 and 19-20, Lakkakorpi discloses wherein calculating a load tracking value based on two or more periodic load indications comprises calculating a weighted average of two or more periodic load indications and a running average of two or more periodic load indications over a sliding time window (Fig. 5 and paragraph 42-43, the link load is determined by an exponential averaging equation with configurable

Art Unit: 2617

weighting which shows the overview of the equation used over a window set of any size).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention to modify the combination to include the teachings of Lakkakorpi in order to provide a more reliable measurement of the load on which the base changes getting a wider margin of measurements rather than a single measurement which could be a reading where a power spike or fallout occurs giving a false reading.

### ***Allowable Subject Matter***

Claims 5, 10, 12-13, and 21-23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

Art Unit: 2617

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JUSTIN Y. LEE whose telephone number is (571)272-5258. The examiner can normally be reached on M - Thu 9:30 to 8:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard can be reached on (571)272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Justin Y Lee/  
Examiner, Art Unit 2617  
1/24/11

Application/Control Number: 10/723,805  
Art Unit: 2617

Page 10

/Patrick N. Edouard/

Supervisory Patent Examiner, Art Unit 2617